

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Heikki Ilvespää

Serial No.: 08/861,231

Filed: May 21, 1997

For: Method and Apparatus for Reduction of Curling
of Paper in the Drying Section of a Paper Machine

Examiner: Wilson, Pamela
Group Art: 3744

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Board of Patent Appeals and Interferences
Washington, D.C. 20231

REPLY BRIEF

SIR:

This is a reply to the Examiner's Answer dated February 16, 2000.

The Examiner has stated that the Appendix to the Appeal Brief contains errors. Applicant agrees with the Examiner and submits herewith a replacement Appendix to the Appeal Brief, which now includes claims 32 and 39 as amended in the Amendment dated December 28, 1998.

The Examiner has contended that the reissue claims are barred by the recapture doctrine set forth by the Federal Circuit in In re Clement, 45 U.S.P.Q.2d 1161 (Fed. Cir. 1997) because "applicant has broadened the patent claims in a manner directly pertinent to the subject matter that applicant surrendered during the prosecution." The Examiner has stated that "Applicant broadens the original claimed material limitation of 'steam' to 'moisture and heat.' This is novel in the treatment of the processing of the paper web."

The basis for the alleged broadening is inherently in the original limitation of "steam" for steam is inherently moist and warm, thereby providing a basis for the use of the

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expression of "moisture and heat." Therefore, applicant has not broadened the patent claims in a manner directly pertinent to the subject matter that applicant surrendered during the prosecution. Applicant submits that the recapture rule is avoided under the principles stated in Hester Industries, Inc. v. Stein Inc., 46 U.S.P.Q. 2d 1161 (Fed. Cir. 1997), which, the Examiner now agrees, is applicable to the facts of the present application. Hester Industries, the latest Federal Circuit case on the recapture doctrine to date, states that the recapture rule can be avoided "when the reissue claims are materially narrower in other overlooked aspects of the invention. The purpose of this exception to the recapture rule is to allow the patentee to obtain through reissue a scope of protection to which he is rightfully entitled for such overlooked aspects." Id. at 1650.

Applicant respectfully submits that the reissue claims of the present application are materially narrower than the canceled claims of the original patent application, for at least the reasons stated in the Appeal Brief, namely, the limiting of the dryer section configuration to an all top felted single tier dryer section. Applicant notes that the materially narrowed limitation of asymmetrically drying a paper web using an all top-felted single tier dryer section is new and different from the original claim limitation. But the Examiner asserts that "the limitations that applicant suggests are narrowed material limitations that were overlooked are merely recitations of a typical dryer structure for paper webs, including the arrangement of cylinders, guide rolls, wires and web." According to the Examiner "these features are old and well known structure of dryer groups and are not deemed to be material limitations."

The Federal Circuit has long ago rejected an analysis of a claimed invention that focuses on "a combination of old elements." In fact, the Federal Circuit has consistently held that "a combination may be patentable whether it be composed of elements all new, partly new or all old." Rosemount, Inc. v. Beckman Instruments, Inc., 221 U.S.P.Q. 1, 7 (Fed. Cir. 1984). The Examiner has cited no case law for her proposition that the scope of the reissue claims should be compared with the prior art, rather than with the canceled claims in determining the materiality of the narrowed limitations. Nor is there any known precedent for the Examiner's assertion that a claim cannot be materially narrowed by restricting one of the claim elements to a particular and heretofore known form of that element.

In sum, the reissue claims of the present application avoid the recapture rule because they contain overlooked, narrowed, material limitations and should be allowed.

Allowance of the reissue claims is respectfully urged.

Respectfully submitted,
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Dated: March 30, 2000

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APPENDIX A

--26. A method of reducing the tendency of a paper web to curl in a paper machine, comprising the steps of:

asymmetrically drying the paper web in its thickness direction extending between the top and bottom sides of the paper web to a solids content at which curl-inducing stresses are formed in the paper web by passing the paper web through a plurality of top-felted single-tier normal dryer groups, each of said plurality of normal dryer groups including a single tier of dryer cylinders, a plurality of guide rolls disposed below and between said dryer cylinders, and a single wire transporting said web over the dryer cylinders and beneath the guide rolls so that only the bottom side of said web engages said dryer cylinders; and

subsequently applying sufficient heat and moisture to the asymmetrically dried paper web to relax said stresses in the fiber mesh of the paper web, to thereby control curling of the web.--

--28. The method of claim 26, wherein said guide rolls are suction cylinders. --

--29. The method of claim 26, wherein said moisture is in the form of steam condensate.--

--30. The method claim 26, wherein said heat and moisture are applied across the entire width of the paper web.--

--31. The method of claim 26, wherein said heat and moisture are applied to said web immediately downstream of the location where said stresses are formed.--

--32. The method of claim 26, wherein said stresses in the paper web are formed at a solids content of at least about 70%.--

--33. The method of claim 26, wherein said heat and moisture are applied to the side of the web not engaging said dryer cylinders.--

--34. A paper machine, comprising:
a dryer for asymmetrically drying a paper web in its thickness direction extending between the top and bottom sides of the paper web to a solids content at which curl-inducing stresses are formed in the paper web, said dryer including a plurality of top-felted single-tier normal dryer groups, each of said plurality of normal dryer groups including a single tier of dryer cylinders, a plurality of guide rolls disposed below and between said dryer cylinders, and a single wire transporting said web over the dryer cylinders and beneath the guide rolls so that only the bottom side of said web engages said dryer cylinders; and
a device for applying heat and moisture to the asymmetrically dried paper web for relaxing said stresses to thereby control curling of the web.--

--36. The paper machine of claim 34, wherein said device for applying heat and moisture is disposed immediately downstream of said plurality of normal dryer groups.--

--37. The paper machine of claim 34, wherein said device for applying heat and moisture extends across the entire width of the paper web.--

--38. The paper machine of claim 35, wherein said guide rolls are suction cylinders.--

--39. The paper machine of claim 34, wherein said stresses in said fiber mesh of the paper web are formed at a solids content of at least about 70%.--

--40. The paper machine of claim 34, wherein said device for applying heat and moisture includes a steam box.--

--41. The paper machine of claim 34, wherein said heat and moisture are applied to the side of the web not engaging said dryer cylinders.--